

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Expanding Flexible Use of the 3.7 GHz to 4.2)	GN Docket No. 18-122
GHz Band)	
)	

COMMENTS OF FEDERATED WIRELESS, INC.

Federated Wireless, Inc. (“Federated Wireless”) offers these comments in response to the Public Notice (“PN”) issued by the Federal Communications Commission’s Office of Engineering and Technology, International, and Wireless Telecommunications Bureaus (“Commission”) in the above-captioned proceeding.¹ Federated Wireless urges the Commission to assess the operations and possible impact of dynamic spectrum sharing with the primary objective of maximizing efficient use of the 3.7-4.2 GHz band.

In the PN, the Commission seeks comment for an upcoming Commission report that will address the feasibility of allowing commercial wireless services to use, or share use of, the 3.7-4.2 GHz band.² The PN seeks comment on (a) how to assess the operations and possible impacts of sharing on Federal and non-Federal users already operating in the 3.7-4.2 GHz band, (b) how might sharing be accomplished, with licensed or unlicensed operations, without causing harmful interference to Federal and non-Federal users already operating in the 3.7-4.2 GHz band and in

¹ See *Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band*, GN Docket No. 18-122, Public Notice, FCC 18-446 (2018).

² See Consolidated Appropriations Act, 2018, P.L. 115-141, Division P, the Repack Airwaves Yielding Better Access for Users of Modern Services (RAY BAUM’S) Act. Title VI of the RAY BAUM’S Act is the Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless Act or MOBILE NOW Act (Act) at Section 605 (mandating that the Commission submit a report on the feasibility of allowing commercial wireless use, or shared use, of the 3.7-4.2 GHz band to Congress no later than September 23, 2019).

which parts of the 3.7-4.2 GHz band would sharing be feasible. The Commission further asks what other considerations it should take into account in preparing the 3.7-4.2 GHz band report.

As previously noted by Federated Wireless, a broad cross-section of commenters agree that shared use, enabled by dynamic spectrum sharing technology, is the best and fastest path to enabling flexible use of the 3.7-4.2 GHz band.³ Federated Wireless believes the Commission should have as its primary goal expeditiously maximizing the efficient use of spectrum in order to allow the largest possible number of users to access this limited resource. Although there are alternative ways to address the shortage of usable spectrum (e.g., clear and auction, repackaging, co-location, sharing), of all the methods dynamic spectrum sharing holds the greatest promise of achieving this important goal quickly. Indeed, a Spectrum Access System (“SAS”) for the Citizens Broadband Radio Service (“CBRS”) band is about to undergo certification testing with commercial deployment of CBRS expected before the end of 2018. Such a system is already perfectly suited to manage dynamic spectrum sharing in the 3.7-4.2 GHz band.

The Commission asks how it should assess the operations and possible impact of sharing. From a high level, dynamic sharing offers advantages that other spectrum access mechanisms do not, including (a) speed to market and agility of deployment, (b) seamless protection of incumbent users, (c) creation of multiple “winners” who may utilize the 3.7-4.2 GHz band (and avoidance of a single “winner takes all” approach), and (d) the existence of a robust and large ecosystem of suppliers and vendors. Further, if the Commission believes there are certain efficiencies that are gained through more traditional spectrum access mechanisms, such as an auction process, the available 500 megahertz of spectrum can be bifurcated such that a dynamically shared segment can coexist with a traditional licensed-by-auction segment. In such a scenario, a portion of the 3.7-4.2

³ See Reply Comments of Federated Wireless, Inc. GN Docket No. 17-183 (filed Nov. 15, 2017).

GHz band could be designated for a public or private auction and the remaining portion designated for shared use.

However, as noted in comments to the Commission’s recent Mid-Band Notice of Inquiry (“Mid-Band NOI”), reallocating spectrum through auction is, typically, a very long process.⁴ It takes between six and 18 years—on average 13 years—to reallocate spectrum, from the time of the initial Commission Order to first deployment.⁵ Given this long potential delay, the Commission could initially make the entire band available for dynamic sharing and, once a licensee is ready to commence service, restrict shared operations to only the dynamic sharing segment of the band. For example, the Commission could set aside 200 megahertz to be auctioned for licensed use and designate the remaining 300 megahertz for shared use. Under such a regulatory framework, the Commission would be able to immediately maximize spectrum use and ensure those efficiencies continue. The U.S. is the global leader in dynamic sharing and the Commission has an opportunity here to continue to lead by making more dynamic sharing opportunities available to U.S. companies.

As numerous commenters have noted, mid-band spectrum such as the 3.7-4.2 GHz band will be integral to 5G networks.⁶ In the race to 5G, the U.S. cannot afford to have such valuable spectrum sidelined for over a decade. By capitalizing on the extensive work already accomplished for CBRS and extending those rules into the 3.7-4.2 GHz band, either in its entirety or a portion,

⁴ Joint Comments of Intelsat License LLC and Intel Corporation, GN Docket No. 17-183, at 12 (filed Oct. 2, 2017) (“Intelsat and Intel Joint Comments”), citing CTIA, *Fostering 21st Century Wireless Connectivity: Key Spectrum & Infrastructure Issues for Policymakers*, at 4 (Jan. 12, 2017); Thomas K. Sawanobori, CTIA, *From Proposal to Deployment: The History of Spectrum Allocation Timelines*, at 2 (2015) (“A review of previous allocation efforts show that it takes, on average, 13 years to reallocate spectrum for wireless use.”) (“Sawanobori Report”).

⁵ See Intelsat and Intel Joint Comments at 12.

⁶ See, e.g., Comments of Verizon Wireless GN Dkt. No. 17-183 at 1, Comments of T-Mobile GN Dkt. No. 17-183 at 2, Comments of Nokia GN Dkt. No. 17-183 at 6-12, Comments of CTIA GN Dkt. No. 17-183 at 6.

dynamic sharing would enable immediate use of the band for 5G, while preserving the opportunity for later licensing. This hybrid approach is reasonable and forward thinking.

Federated Wireless commends the Commission on its efforts to maximize the efficient use of dynamic spectrum sharing for deployment in the 3.7-4.2 GHz band, and trusts that the Commission will achieve its goals after careful consideration of the benefits of dynamic spectrum sharing.

I. THE SPEED AND AGILITY THROUGH WHICH DYNAMIC SPECTRUM SHARING CAN BE IMPLEMENTED AND DEPLOYED MAKE IT AN IDEAL APPROACH TOWARD ACHIEVING THE PRIMARY GOAL OF MAXIMING EFFICIENT USE OF THE 3.7-4.2 GHZ BAND.

The Commission embarked on a bold experiment in 2015, when it adopted rules to create the CBRS in the 3.55-3.7 GHz band.⁷ Until then, dynamic spectrum sharing had only been attempted on a wide-scale through simple means – dynamic frequency selection in some of the 5 GHz U-NII bands followed by simple database enabled look-up for whitespace in the TV bands. Now, only 3 years later, the CBRS, with its sophisticated spectrum access system (“SAS”) and environmental sensing capability (“ESC”) will soon be providing commercial service in a truly dynamic sharing environment. The CBRS will enable disparate users with different service requirements and protection requirements to operate across the same spectrum in the same areas while seamlessly protecting incumbent users including federal radar systems and fixed satellite service receive stations.

The development effort to bring CBRS to fruition has been moving at breakneck speed and has participants from all sectors of the telecommunications ecosystem from infrastructure vendors to device makers to database providers and end users. The rapid development of the 3.55-3.7 GHz

⁷ Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band, GN Dkt. No. 12-354, Report and Order and Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 (2015).

band stands in sharp contrast to the typical time to allocate spectrum and deploy service using more conventional methods, such as competitive bidding and band clearing. As already noted, it takes 13 years on average to reallocate spectrum, from the time of the initial Commission Order to first deployment.” This time frame is likely to hold, even for auctions conducted on a private basis as proposed by Intelsat. However, in the race to 5G, such long timeframes are a liability that America cannot afford.

The 3.7-4.2 GHz band is encumbered with satellite earth stations and fixed links. Under Commission precedent, new licensees would need to accommodate each of these incumbent licensees on new spectrum with comparable facilities or otherwise protect them from harmful interference. Only dynamic sharing provides spectrum access quickly and efficiently with no disruption to incumbent operations. Using a SAS, a database administrator could manage band usage to assign new spectrum users across the 3.7-4.2 GHz band when and where the spectrum is available. Real time coordination among satellite use, fixed links, and mobile operations could be done seamlessly to enable interference free operation for all users and can be initiated with very short lead time. To enable fuller and more robust use of the 3.7-4.2 GHz band in the shortest time possible, the Commission could extend use of the SAS developed for CBRS to the upper adjacent 3.7-4.2 GHz band to provide the same dynamic coordination services in that band as it does in the band below. It is clearly apparent that a SAS enabled 3.7-4.2 GHz band could provide access for new licensees much sooner than if the Commission were to conduct an auction.

Aside from the speed of bringing new service to the 3.7-4.2 GHz band, dynamic sharing through a SAS is agile and flexible and can easily adapt to changing spectral conditions and environments. The technology’s strength lies in its ability to quickly adapt to any set of rules in any band. Creating and assigning protection through “priority tiers”, if any, can be fully customized, as can the rules pertaining to prioritization, size, location, duration of spectrum grants, and more. The

parameters can be changed if subsequent circumstances warrant, and typically such changes require little more than changes to software code. Conceptually, so long as the SAS knows the rules for the band, it can assign spectrum and provide protection when and where needed. In considering the 3.7-4.2 GHz band, which does not have a federal allocation, the sharing rules would be simpler than those already implemented in the CBRS. In fact, very little modification to the existing SAS would be required, and no ESC would be needed. Incumbent systems would only comprise known locations of FSS earth stations (something it already does in the CBRS band) and fixed links (also fairly straightforward to protect) rather than also accounting for shipborne radars moving along the coasts, as in CBRS. And, as opposed to an auction, those incumbent users will not have to relocate or otherwise make changes to their operations. This will further speed deployment by eliminating the laborious and time-consuming process of waiting for relocation to be completed.

New users of the 3.7-4.2 GHz band will be able to access and use the available spectrum as soon as SAS administrators pass the necessary certification tests administered by the Commission. Here too, the Commission can be forward looking and hasten the process. The SAS administrators along with numerous partners have been conducting pre-commercial trials for quite some time.⁸ And the SASs are expected to soon begin extensive bench and real-world testing as part of the SAS certification process. The Commission and SAS Administrators have learned to efficiently deploy dynamic spectrum sharing through the processes and procedures developed and adopted by the Commission and the standards developed by WinnForum. These same processes used for the

⁸ See, e.g., Baumgartner, Jeff, “Verizon Touts CBRS Trial on Live Network,” Multichannel News (May 15, 2018), at: <https://www.multichannel.com/news/verizon-touts-cbrs-trial-live-network>; “An Up-Close Look at Charter’s Network Operations and 3.5 GHz Trials in Tampa,” Charter Communications Policy Blog (May 4, 2018), at: <https://policy.charter.com/blog/close-look-charters-network-operations-3-5-ghz-trials-tampa/>; Allevan, Monica, “Telrad, Federated Wireless strike multiyear CBRS deal,” FierceWireless (Jan 18, 2018), at: <https://www.fiercewireless.com/wireless/telrad-federated-wireless-strike-multi-year-cbrs-deal>.

CBRS roll-out can be used for the 3.7-4.2 GHz band but can be implemented on a much shorter timescale. In fact, the Commission can take another bold step here and further streamline the process for enabling service by only implementing a minimalist certification/testing process for SAS's that are already approved for the CBRS band.

Now, as the Commission considers options for making the 3.7-4.2 GHz band more widely available, it must consider how to put the band to its best and highest use while balancing the need to do so quickly and the interests of incumbents. Considering the impending deployment of CBRS in an adjacent band, the relative ease of quickly applying the CBRS model to the 3.7-4.2 GHz band, the current usage of the band, and the ability of dynamic sharing to seamlessly accommodate incumbents, the clear conclusion is that dynamic sharing would provide the quickest and most efficient method of enabling more efficient use while minimizing disruption of existing band users.

II. THE COMMISSION WILL FOSTER SIGNIFICANTLY GREATER USE OF THE 3.7-4.2 GHZ BAND ALONG WITH ENCOURAGING TECHNOLOGICAL INNOVATION BY TAKING A HYBRID APPROACH.

Another benefit of dynamic shared spectrum is that it provides the Commission options to have multiple “winners” and create business opportunities across the entire telecommunications ecosystem. Such an outcome can take many forms ranging from fully shared dynamic spectrum across the entire 500 megahertz of the 3.7-4.2 GHz band or a combination of a dynamically shared spectrum segment and an exclusive spectrum segment awarded via traditional auction processes. In either case, this approach avoids the pitfalls of a single “winner takes all” outcome of auctioning the entire band where all other prospective spectrum users are literally shut out, except those that the winner allows to use the auctioned spectrum.

We suggest that the Commission should seek to maximize efficiency of the band by enabling the largest number of users to implement spectrum-based business plans for a variety of services. That approach has drawn widespread interest in the neighboring CBRS band and it could do the

same here. However, because there is more than three times as much spectrum available in the 3.7-4.2 GHz band as in the CBRS band, the Commission can take an adjusted approach that balances exclusive licensing and sharing. Given the 500 megahertz of this band, the Commission, should consider a hybrid approach, allocating a portion of spectrum for a traditional winner take all auction and another for dynamic sharing.

In taking a hybrid approach, the Commission can continue its global leadership and push the technological envelope by expanding dynamic sharing opportunities and also provide spectrum on an exclusive basis to those entities willing to invest in building large-scale networks. While Federated Wireless believes that sharing across the entire band will maximize efficiency, we acknowledge that some interested parties have different business plans and are seeking exclusive rights to spectrum over large areas. For other entities, dynamic sharing offers flexibility to target system deployments when and where needed. To achieve maximum benefit, however, the Commission should, similar to the rule for CBRS, require all equipment to be operable across all or any portion of the 3.7-4.2 GHz band designated for dynamic sharing. This approach provides spectrum based business opportunities with low entry barriers as entities do not need to purchase spectrum outright, but instead can pay for access on an as needed basis. Not only does this reduce capital and operating expenditures for businesses, it allows maximum use of the spectrum as it never has an opportunity to lay fallow due to a licensee with low traffic requirements. Simply stated, dynamic spectrum sharing ensures that virtually anyone with a properly certified and registered device will have an opportunity to use the spectrum, when and where wanted and needed. In this way dynamic sharing extends the burgeoning sharing economy to spectrum. In the same way Uber and Lyft provide more efficient use of the roads through ride sharing, dynamic spectrum sharing ensures efficient use of spectrum.

The 500 megahertz of the 3.7-4.2 GHz band presents an opportunity for the Commission to meet multiple key objectives in its approach to using the band, by combining the speed and flexibility of dynamic sharing with the reliability of exclusive licensing. In doing so, Federated Wireless believes that a 300/200 megahertz split would be appropriate. For example, the CBRS can be extended up to include 3.7-4.0 MHz and the Commission can auction 200 megahertz in the 4.0-4.2 MHz band. The CBRS has garnered much support from a wide variety of entities including WISPs, utilities, and manufacturers. Expanding the CBRS in this manner will provide spectrum for these businesses to expand applications to support processes, including industrial IoT, and create operating efficiencies to benefit the American economy and the consumer. Likewise, an auction of 200 megahertz can support two 100 megahertz channels or four 50 megahertz channels, an ideal amount of spectrum for new 5G services. This new exclusively licensed band could be used in conjunction with any other spectrum the Commission may make available through its examination of spectrum in the Mid-Band NOI. Indeed, the proximity of this band to the CBRS provides an easy way to expand dynamic spectrum access while other bands could be cleared to support exclusive use auctioned services.

Providing for dynamic spectrum sharing in the 3.7-4.2 GHz band can provide an additional win for the Commission and spectrum users as they seek to use spectrum more efficiently. Under a hybrid approach, some spectrum must still be cleared after conclusion of an auction; as we have noted, this can be a long process. However, dynamic sharing allows the Commission to put that fallow spectrum to the most efficient use in the interim. Prior to and during any transition, the Commission could allow use of the spectrum throughout the entire 500 megahertz on a dynamically shared basis. As spectrum is cleared and auction winners begin to deploy service, it is a simple function for the SAS to likewise restrict usage of portions of the auctioned segment in targeted

areas. Thereby, businesses could use the spectrum as intensely and efficiently as possible until the auction winner is ready to begin using that same spectrum.

An additional advantage for the hybrid approach stems from the SAS's built in ability to conduct real time coordination, even after an auction is conducted and an auction winner deploys service. In the CBRS proceeding examining license sizes, advocates for larger license sizes have argued that auction winners that do not have business plans to build-out a network over an entire area can provide access to other entities through secondary market transactions (e.g., leasing or partitioning).⁹ The SAS is well equipped to handle these situations and ensure that frequencies are properly assigned and interference protection is provided as appropriate. The same would be true for the 3.7-4.2 GHz band. Once the SASs build their capability for this band, the SASs provide complete flexibility for licensees to manage their spectrum to meet their business plans. As such, auction winners can cooperatively work with other entities, if desired, to provide secondary market access to their spectrum and the SAS can manage the access under any contractual arrangements the parties work out. In this way, providing dynamic spectrum sharing in the 3.7-4.2 GHz band managed through a SAS will ensure the spectrum is used to its maximum extent and as efficiently as possible while still ensuring that incumbent licensees are protected from harmful interference.

III. A LARGE AND ROBUST ECOSYSTEM ALREADY EXISTS TO SUPPORT A DYNAMIC SPECTRUM SHARING PLATFORM AND WILL HELP ENSURE THE SUCCESS OF EFFICIENT SPECTRUM SHARING IN THE C-BAND.

Because of the Commission's previous wise decision to approve the use of dynamic spectrum sharing in the CBRS band, a large and robust ecosystem has already developed, including equipment vendors and industry associations. For the CBRS band alone, a substantial number of OEMs and technology suppliers are already building compatible, interoperable equipment. These

⁹ See, e.g., Verizon comments Dkt. No 17-258 at 14-16; T-Mobile comments at 12; AT&T comments at 7-9.

companies include some of the biggest names in the industry, such as Airspan, Baicell, Ericsson, Intel, Motorola, Nokia, Qualcomm, Ruckus Networks, and Samsung to name a few. The broader industry familiarity with dynamic spectrum sharing technology should spur rapid adoption and deployment of compatible equipment. Indeed, it should be a simple modification to extend CBRS equipment into the 3.7-4.2 GHz band as it is anticipated that the same hardware, including the antenna can operate into the expanded band.

In addition to the hardware and devices, the SAS administrators are familiar with and experienced in the deployment of dynamic spectrum sharing technology. In fact, SAS providers have been operating on an experimental basis already, and have been quickly and efficiently protecting licensees, including satellite earth stations – in many cases, the same earth stations that operate in the adjacent 3.7-4.2 GHz band. The first wave of SAS administrators has already received conditional approval and expect to receive final approval (and limited commercial launch) before the end of 2018. Extending the SAS into the 3.7-4.2 GHz band is straightforward and can be accomplished in a short period of time.

Customers for the CBRS band, ranging from small businesses to major corporations, are already developing new business models that will maximize their ability to use spectrum on a shared basis. These business models may be carried over into the 3.7-4.2 GHz band or may form the basis for the development of new business models utilizing the 3.7-4.2 GHz band. For example, Verizon, Ericsson, Federated Wireless and Qualcomm recently announced that it has successfully tested 4G LTE technology over CBRS spectrum in Verizon's live commercial network.¹⁰ The NFL has

¹⁰ Cellco Partnership Experimental Special Temporary Authority callsign WM9XQM; *See also*, Verizon press release, "You don't need high grade Navy radar systems to spot which companies just achieved another industry milestone for customers," May 15, 2018, at: <http://www.verizon.com/about/news/you-dont-need-high-grade-navy-radar-systems-spot-which-companies-just-achieved-another>.

recently announced its interest in studying use of CBRS for game-day communications.¹¹ General Electric, Qualcomm and Nokia have recently been testing a private LTE network using CBRS spectrum to support Industrial IoT applications.¹² And WISPs are interested in using CBRS to extend their broadband offerings to customers (generally rural) and provide a greater quality of service than they can today.¹³

Moreover, in just under two years the CBRS alliance has grown to over 80 companies committed to ensuring success in the band.¹⁴ Capitalizing on the interest, the CBRS alliance recently launched the OnGo brand and announced a certification program for CBRS LTE equipment. This will give users the assurance that equipment is compatible with the WinnForum developed technical specifications, the Commission's rules, and the SASs. This same commitment to the CBRS can be harnessed to extend into the 3.7-4.2 GHz band.

Finally, we note that the 3.7-4.2 GHz band is becoming globally harmonized for 5G. In fact, the first commercial 5G deployments in the 3.5 GHz band were recently announced in the UAE, Saudi Arabia and Qatar.¹⁵ Many other countries are setting aside the 3.4-4.2 GHz spectrum band for

¹¹ National Football League application for Experimental Special Temporary Authority, File No. 0854-EX-ST-2018.

¹² Qualcomm Press Release, GE, Nokia and Qualcomm Unveil First Private LTE-based Trial Network Customized for Industrial IoT (Feb. 22, 2017), at: <https://www.qualcomm.com/news/releases/2017/02/22/ge-nokia-and-qualcomm-unveil-first-private-lte-based-trial-network>.

¹³ See, e.g., Comments of Wireless Internet Service Providers Association in GN Dkt. No. 17-258 at iv. (“Wireless Internet service providers (“WISPs”) need mid-band spectrum to connect customers in non-line-of-sight conditions, and to provide additional capacity in areas where the unlicensed bands are congested. CBRS spectrum is the only mid-band spectrum that can be made available to WISPs and other competitive providers in the near term, ...”).

¹⁴ See <https://www.cbrsalliance.org/about-us/>.

¹⁵ See Majithia, Kavit, Mobile World Live, “Middle East Giants Jostle for 5G-First Status” (May 15, 2018), at <https://www.mobileworldlive.com/featured-content/home-banner/middle-east-giants-jostle-for-5g-first-status/>.

5G services. This will further drive down prices for compatible equipment, allowing manufacturers to achieve enormous scale, directly benefiting US consumers and further accelerating adoption and deployment of 5G services in the US market.

IV. THE COMMISSION SHOULD ADOPT A SHARING MODEL THAT IS ANALOGOUS TO THE CBRS BAND, BUT WHICH IS OPTIMIZED TO FACILITATE RAPID DEPLOYMENT OF 5G SERVICES OVER THE SHARED C-BAND.

The hard work in developing the CBRS rules and implementing them within a SAS is already done. The Commission can leverage that work to quickly allow sharing in other bands, especially the adjacent 3.7-4.2 GHz band, with similar earth station sharing requirements. One approach that the Commission could pursue is to approve an adaptation of the CBRS model. Such an approach has the benefit of building off known processes and procedures. The Commission, once it adopts new rules, could streamline the approval process for existing SAS administrators. The initial tranche of SASs are going through an extensive testing regime to ensure they properly protect incumbent users and assign spectrum in accordance with Commission rules. That logic would be essentially unchanged for the 3.7-4.2 GHz band. Thus, the Commission could provide, for existing certified SAS administrators, a streamlined approval process with minimal demonstration requirements to facilitate a very quick service roll-out.

In doing so, the Commission could exploit the flexible and adaptable dynamic spectrum sharing infrastructure to create a simple two tier model – incumbents (FSS earth stations and fixed link licensees) and everyone else who would operate similar to the General Authorized Access users in the CBRS band, either as unlicensed or licensed by rule. Alternatively, the Commission could adopt a form of licensed second (or even third) tier of priority users with sufficient geographic scope and duration to attract and spur investment.

To make this all work, incumbent non-federal users would receive priority access, provided they update the Commission's licensing database with accurate information on location and

characteristics of ground stations already deployed. This is necessary to ensure SAS administrators protect actual operations and provide the requisite interference protection to those stations. Interference can be fully mitigated, provided existing ground station incumbents are required to provide to the Commission accurate data (location, azimuth, height, etc.) of each ground station and to update the information on a regular basis. On this point, we note Google's analysis showing that almost a third of all registered sites in the IBFS database are clearly not being used for satellite services.¹⁶ Given the apparent inaccuracies in the Commission's data, the database must be updated to reflect actual usage so that phantom sites do not preclude spectrum use of those who need and value it most. The Commission has made a start on this effort with its recent Public Notice freezing new and modified applications in the 3.7-4.2 GHz band and allowing entities to file an application to register or license an earth station if it is currently not registered or licensed.¹⁷ However, in order to clean up the database of stations not actually in operation, the Commission should provide a window in which licensees must affirmatively inform the Commission that its station(s) are still in operation and update any technical information, if necessary. FSS licensees that fail to timely verify and provide accurate technical information would not be guaranteed interference protection as the SAS would be unable to account for its actual operation. This is the fastest, most efficient, and most accurate way of ensuring protection of operating earth stations. However, in taking such a step, the Commission would be laying the groundwork to successful dynamic sharing and maximizing efficient spectrum use in the 3.7-4.2 GHz band.

¹⁶ Comments of Google LLC and Alphabet Access, GN Docket No. 17-183, at 4-7 (filed Oct. 2, 2017).

¹⁷ Temporary Freeze on Applications for New or Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band, 90-Day Window to File Applications for Earth Stations Currently Operating in 3.7-4.2 GHz Band, Public Notice, DA 18-398 (Apr. 19, 2018) ("Public Notice").

V. CONCLUSION.

Federated Wireless commends the Commission on its innovative efforts supporting dynamic spectrum sharing. These efforts have made the U.S. the word leader in this technology. The Commission now has an opportunity to further its global leadership by extending the same principles governing the CBRS band to all or a portion of the 3.7-4.2 GHz band. Using the same SAS as developed for CBRS in the 3.7-4.2 GHz band is the fastest way to enable more intensive and efficient use of that spectrum by enabling low entry costs for new entrants and providing interference protection for incumbents with no disruption of their services. Dynamic spectrum sharing in the 3.7-4.2 GHz band will result in a win for American businesses as they gain access to additional mid-band spectrum, and a win for the FCC and the U.S. as it continues its global lead in this technology. Federated Wireless stands ready to engage with the Commission and other interested parties to help the Commission achieve its primary goal of maximizing efficient use of the 3.7-4.2 GHz band spectrum.

Respectfully submitted,

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